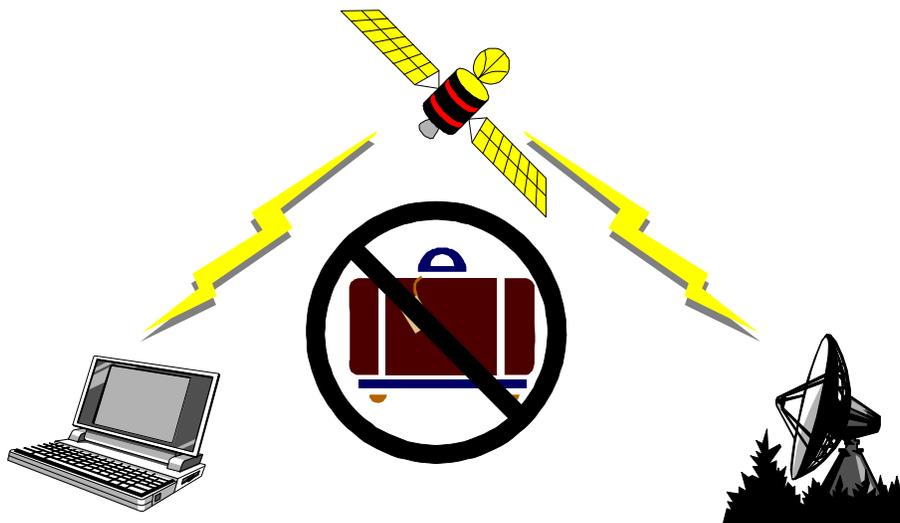


Grounded

U.S. Economic Competitiveness	Worldwide Demand for Aero Products/Services	Threats to Global Security and/or Quality of Life	Global Trend in Govt. Participation in Society
Strong	Low Growth	High	High



Summary

Out of dreadful necessity, the world has replaced “being there” with virtuality. For too many people in too many places the rate and pace of change stripped them of their humanity. Angry, frustrated, bitter, jealous individuals and groups with increasing frequency resorted to unprecedented and unpredictable violence against large masses of people wherever they could be targeted. All forms of mass transit, large public gatherings, dense urban environment (despite onerous and very expensive security measures) are now avoided, if possible. The global economy has, however, avoided collapse and indeed more than risen to the challenge thanks to the infocom revolution. Travel may be but a specter of its past, but massively expanded bandwidth now ties the world far closer than it ever was in the past. All aspects of life, commerce, government, culture, and entertainment flow continuously and globally through the G-net. The economy’s vitality is still derived from the rapid pace of technological advance, product innovation, and entrepreneurship. Goods still move great distances through the global economy, occasionally at risk, but goods are expendable; people move only when absolutely necessary. Each day it becomes more amazing what simulation can do.

Global Business in 2020. (New York: Harcourt Brace and Pearce, 2021.) An introductory essay to the second edition.

No matter how elegant are the arguments that “technologies emerge to match the need,” there is no getting around the common-sense position that, as a civilization, we have been very lucky. If the terrorplots and mass killings of the mid-2000s had swept through the globe a few decades earlier, democracies might not have survived the need for oppressive police controls to keep societies functioning. Beyond that, the growth of the global free market (and the improvements in worldwide living standards that have ensued) might have been postponed indefinitely. It is unlikely that the more fragile technological and economic systems of that earlier era could have withstood the onslaught of death, terror, and infrastructure destruction that we endured just a few short years ago.

As an interesting (but relevant) example, many in that peaceful and complacent era (1960 through 2005) would have said that it is implausible (perhaps impossible) that a global economy and society could thrive without dependence on the rapid growth of air transport. It was one of those conventional wisdoms — the growth of the global economy and the growth of global aeronautics were synonymous. They were mutually dependent on each other. As the world economy began a serious phase of rapid globalization in the 1990s and early 2000s, it was common, even in periods of economic recession, to forecast the symbiotic growth of aeronautics. It was so obvious. What could stop or replace its central role, especially in the high-growth emerging markets?

This textbook has no history section; and, while I am certain that all readers are familiar with the events of the past twenty years, I wish you to immerse yourselves, briefly, in the mindset of optimism and growth that characterized the late 1990s and early 2000s. It will give you an important perspective on today’s business and political climate. It should also teach you never to assume; never assume you can predict even the most “obvious” trends.

The world economy of the late 1990s and early 2000s was growing at unprecedented rates. Moreover, it was a growth pattern characterized by interconnectivity of businesses, organizations, and individuals on a worldwide scale. That dynamic growth and inter-connectivity sat on six pillars — the U.S. economy as an early engine of growth, relative global peace, free trade, telecommunications, fast and reliable transportation, and efficient global capital markets. While the mature market economies of North America, Europe, and Japan grew steadily, they pumped capital into the rapidly developing emerging markets of Southeast Asia (SEA) and Latin America. Products were manufactured and assembled on a global scale and sold into the mature affluence of the Northern industrial powers and into the burgeoning middle classes of the emerging markets.

The U.S. economy did well during this period and the government spent some of its wealth putting its economic and social house in order. While industries globalized, consolidated, and spun off multiple service sector support firms, the government used the increased revenues from corporate and income taxes to end the deficit and pay down the debt substantially. If the society was spending too little on infrastructure and alternatives to conventional technologies, . . . well, those issues would either respond to market forces or be dealt with in the coming years. The U.S. shifted farther into a modestly regulated economy with market incentives for enforcement. While

some serious “transition” inequities arose in social services,¹ the evolution of safety-net spending to the states went relatively smoothly. This was a time of global business interests and minimalist government enabled by a fairly peaceful world.

Europe and Japan continued to lag somewhat under the burden of higher and more intractable public debt, but nevertheless took part in the globalizing economy. They, too, saw their industries move manufacturing abroad, expanding to the promise of rapidly growing markets, while profits flowed back home. Like U.S. industries, the Europeans tended to invest in all regions, while the Japanese had a tendency to focus on SEA. This is a good time, however, to point out that it was not so much the European or Japanese societies that did this investing. It was the work of the industries and services that had originated there. It is useful to remember that, while the brief recession of 2003 hit the U.S., Europe, and Japan fairly hard, the (now) global industries that had once been called U.S. or European suffered very little.

Industries were becoming truly global organizations, yearly increasing the social distance between the corporation and the country where it had originated. Businesses were investing everywhere they saw the potential for market growth or lower production costs. In the free trade regimen of the time that meant that few products had clear national origins any longer. From consumer electronics to passenger airplanes, design, component manufacture, and assembly took place globally. For truly large multinational corporations, this globalization offered some remarkable advantages. The economies of scale possible with global markets kept costs down as did the flexibility to locate manufacturing in locations with low labor costs and investment incentives (like minimalist environmental regulations). Large global corporations were in a position to flexibly shift products into whatever markets were experiencing the most growth, and to shift production to mitigate global currency fluctuations. These trends led rather inevitably to global consolidations in most industry segments — bigger was definitely better.²

While many factors contributed to global growth, it was the nexus of telecommunications and air transport that made the world hum. Confounding the predictions of many computer industry pundits, the explosion in telecommunications actually ignited air transport into a global growth surge. Part of the reason, of course, was the somewhat chaotic state of the telecom-internet system. In the late 1990s and early 2000s it exhibited all the best and worst features of a new free market technology. New network performance was constantly being added while a plethora of business and personal applications flooded the marketplace. The pace was so fast that industry standards and protocols actually fell behind. This was compounded by the fact that the business model that maintained cash flow into the network owners was increasingly under pressure. Competition from new entrants and new technologies plus price wars led to several bankruptcies and inevitable disruptions in service globally. The result was that businesses could make excellent use of the network, provided nothing crucial was committed to the ether. The need for personal

¹ Of course, we can now trace a few of the less effective terrorplots perpetrated on society in the coming years to the anger generated by these “minor and regrettable social service problems.”

² The disaffection many in the world felt toward these huge corporate monoliths that cared only for profits in a shifting marketplace not only contributed to the early terrorplot target lists, but also slowed the public outcry in the very early days of the terror.

contact grew exponentially just as a host of new markets and opportunities were emerging across the globe.

Passenger aircraft, cargo aircraft, specialty air vehicles — faster, bigger, more flexible, more reliable. The market demand was enormous and driven by the needs of international business and an explosion in leisure travel. Spreading global affluence gave many the ability to explore places they had only seen in film — the Castles on the Rhine, the Great Wall of China, and Graceland. It was a time of nearly unprecedented building of global infrastructure, especially in the emerging markets. New national carriers and aerospace firms emerged as demand drove the installation of new production capacity. They stood on their own³; they allied with the giants of the earlier days, and often they merged, as consolidations swept the aeronautics industries.

Of course, this kind of rapid growth left many people and groups behind (only temporarily, it was hoped). In the old industrial nations, the unskilled and semiskilled saw no great advantages to global economic growth. Indeed, the loss of jobs to the emerging markets had hit this group of poorly educated quite hard. They found only spotty relief in service industries that paid modestly well, but demanded long hours, some learning skills, and a very customer friendly persona. The rapid growth of consumerism was not to the liking of many highly conservative religious and cultural authorities, and an interconnected global economy robbed many authoritarian government leaders of the total sovereignty they thought was their due. Corruption, as well, was to be found in many of the most turbulent markets. These issues were not in the field of view of most consumers and voters, however. The world was getting better all the time, and all small “adjustments” would take care of themselves — as they should in a free market system. In a sense, they did take care of themselves.

Considering the dynamism of the age (or perhaps because of it), when the world changed and our lives were altered so profoundly, it happened surprisingly slowly. The change was so significant, that it seems somehow wrong that it should have appeared almost evolutionary. There should have been more high drama — an off-stage narrator who says (in deep and sonorous tones) “. . . and now the world has changed. . .” Yet, the truth was, it took years for it to sink in that our lives might well have been remade forever. My colleagues studying Crimes and Terror in the Department of History debate endlessly on “The Origin.” I, for one, am content with the conventional wisdom that places the beginning of our era at the Ramadan Festival in Medina in 2007. Six thousand Muslim pilgrims dead from the release of mustard gas, while across the globe, over the next four hours, six passenger planes carrying Muslim pilgrims were bombed. No one ever took “credit.” At the time we thought that was unusual!

There was a hue and cry throughout the Islamic world and all caring people of the globe reacted with a mixture of horror and deep sympathy. The initial actions were classic and frightening at the time. Air passenger traffic fell off dramatically for a while, Israel was threatened with invasion, oil was briefly cut off to the West, several Western corporate buildings in the Middle East were destroyed in rioting, and calls for a jihad (but against whom?) were heard from Manila to Morocco. Yet, in the end, there was no evidence; no one to blame. To this day, nearly fifteen

³ Occasionally they had local government subsidy, but also that became increasingly rare as the global free market ethos took hold everywhere.

years later (and despite huge investments in research), no culprit has ever been brought to light. The most amazing theories continue to circulate about “the origin.” It was the Masad; it was the Sword of Isalm, it was the neo-Nazis; it was the Yakuza; it was oil spot market traders. The most interesting thing about the “origin list” is that governments never seem to be seriously considered — and *that* perspective was to be a harbinger of things to come.

Despite grief, fear, and anxiety, the call of global commerce went on. Within a few months, the world was back to its normal hectic pace. A Federal Express plane bound for Memphis was destroyed in a bomb blast, but that received little attention despite the fact that, once again, no one took credit and no one was caught. Then heightened security at airports paid off in a big way. As the Christmas air passenger rush was just beginning, bombs were discovered simultaneously at Heathrow, Kennedy, Chicago, Miami, and Rome. Flights leaving Boston and Frankfurt were not so lucky and five hundred people, mostly families, died in explosions. A pall fell over the world and air traffic in particular as panicked holiday travelers called off their travel plans (especially those flying internationally) Once again — and not for lack of trying over several years — no one was ever caught. Two weeks later, despite very tight security, two flights out of Bombay were destroyed in bomb blasts fifteen minutes apart. This time the perpetrators were caught. Amazingly (at the time) they did not know each other and their efforts had been entirely independent. In one case, a Mr. Madan, had simply decided to use the growing terrorplot mania to cover up the murder of a troublesome business partner. In the other case, the target was the airline itself — destroyed by an ex-employee, fired for a history of “antisocial behavior.”

Not surprisingly, Amtrak, Eurorail, and in fact all land-based mass transit began doing a land office business. Or they did until an Islamic fundamentalist group blew up a train inside the Channel Tunnel, while just a month later a survivalists’ cult tried to blow up an Amtrak train because it was carrying “new Eastern settlers as agents of global capitalism.” Nothing, it appeared, that carried a large group of people, was safe. And that fact — that places with large gatherings of people were not safe — was to become the driving force of our lives.

Stadiums and office buildings, train stations and outdoor concerts, movie theaters and shopping malls — the list of places attacked worldwide over the next five years was as varied as the forms of attack. While there were a few “lone gunmen” with automatic rifles, most forms of terrorplot attack were “impersonal instruments” of large-scale death. Bombs, missiles, and gases were the most common in the beginning, but, as security improved, a more insidious form of attack emerged in the use of airborne infectious diseases. These were especially effective on passenger planes — and airplanes (for all methods of attack) were always the favored target for the publicity (and the degree of difficulty in “succeeding”).

Targets and approaches were not the only things that varied widely, so did the reasons for the attack and the successes at capturing the guilty. Although many were caught, it was very hard to find a guilty party when motives (and credit-taking) were either confused or absent. Imagine a passenger plane has crashed into the ocean. The last few transmissions from the pilot documented high fevers and dizziness among passengers and crew.⁴ Provided you can find the wreckage, how

⁴ Of course, most readers will recognize this particular event and will remember the quite profound effect it had on the traveler psyche.

do you find the culprit? No one admits responsibility. Was it a suicide (to provide insurance money to a family), was it a neo-Nazi effort to destabilize politics, was it a disgruntled ex-employee of the aircraft fuel delivery company, was it done just for the challenge of succeeding, was it done by a company who sells remote diagnostics equipment, was it done out of racial hatred, and on and on . . . As the number of unsolved terrorplots went up, the number of people and organizations attracted to exploiting the situation went up. The threat of capture and punishment was not going to be an effective deterrent, so protection — elaborate and very expensive protection measures — were established.⁵

It became an age-old game of “offense/defense” race. New technologies and operations to protect and secure tried to remain ahead of new terrorplot technologies and approaches to mass murder. Eventually, the defense began to win, because the frequently “independent and unorganized” terrorplots did not have the resources to match corporate and government programs to provide safety and security. However the costs have been very high indeed — in traveler peace-of-mind, time, and money.

No one readily gets on an airplane today; indeed, it has become the case that most people just don't consider flying in the first place. We have not had a successful terrorplot event in four years, but that is no longer the point. Certainly significant residual fear is still in many minds. Despite the fact that security measures seem to be working well, anxiety remains high. As a matter of course, all alternatives to mass travel are explored before a trip is reluctantly undertaken. The more fundamental reason why we have turned from air travel (when possible), however, is the cost in time and money. And the time it takes! Deliver your luggage to the airport one day before your trip (two days for international travel). Arrive at the airport three hours before departure. Wear no metal or plastics. Carry no electronics. Don't plan tight schedules for the other end of your trip because departure times are randomized in half-hour segments. Finally, however, despite the anxiety and the time, it is the increased costs that have become the primary deterrent to extensive use of air travel. Users pay for the enhanced security (even government-mandated security measures) and all the services and technologies that have sprung up to help ease the inconveniences. None of this is a social cost defrayed by the taxpayer. The costs are all directly supported by the traveler — and they are high, very high.

The government's role, of course, has evolved in two complementary directions. Within a year of the 2007 Christmas bombing attempts, as global commerce was beginning to show little recovery from the falloffs due to reduced air travel and transport, the U.S. government launch a significant new policy initiative quite at odds with its laissez faire economic and social policies. Until the

⁵ It has been popular in recent times to criticize the “free market” approach initially taken in security measures. Most people look upon the more recent and very intensive government attention to safety and security as the model that should have been followed in the very beginning. But, it must be remembered, that was not the public attitude of that era. Government intervention was very much out of favor then. And, to be perfectly frank, it is quite possible that far more innovative security operations and technologies came onto the market faster, as a result of market forces, than ever would have been generated in a government procurement system. Costs based on user fees has been expensive for transportation users, but I will argue that efficacy and lives saved has been adequate compensation.

terrorists were caught,⁶ alternatives to the mass transportation of people had to be found. The natural choice was the Internet, but it was not a reliable network — certainly not on a global scale. The U.S. government embarked on a massive program composed of subsidies, tax incentives, regulations, and multi-lateral negotiations to establish a Global Infonet as a reliable backbone for global commerce. In the U.S. the network took the form of a publicly regulated utility with some publicly funded applications (education and public service notices, for example) but mostly privately sold applications for business, communication, and entertainment. The theory was twofold: (1) provide a standardized and superbly reliable backbone for personal, government, and industry use (to “reunite” the country), and (2) subsidize its early globalization as a competitive advantage for U.S. business (to “reunite” the world on terms favorable to the U.S.).

Within eighteen months, the U.S. standard Global Infonet (the G-Net) had become the worldwide standard. With more and more bandwidth and applications constantly added (some at U.S. taxpayer expense), the G-Net was becoming the backbone of global commerce and an acceptable (and very cost competitive) alternative to all but the most essential travel. The global economy started to rebound and U.S. corporations, with “first service” command of key business applications, were well positioned for leadership. The tax money had been well spent.

The second government initiative was to “provide for the public safety.” While the primary philosophy of the government remained noninterventionist, in the area of safety and security nothing short of a massive industrial and defense policy was initiated. Infrastructure, technologies, products and services — if they could improve the safety and security of people while they traveled or met in large groups, then either financing or funding became available. If the solution was applied technology, the marketplace was given free reign. If long-term R&D activities are required, both government and entrepreneurial capital are available. While the government continues to prefer a free market approach, public funding was and is quickly allocated for programs that will provide enhanced security. The mission and budget battles that have erupted over safety missions are fast becoming legendary.

People have adjusted their lives relatively well by 2020. They stay at home more and entertainment tends to be small-group or family oriented. Interactive G-Net programs are quite the rage. Businesses, especially those with a significant global component (which were many) have had a more difficult time. Some have simply failed. The costs of being global were too high as were the costs of shifting to a more regional focus. Some retain their global standing and are trading across the globe but at much higher operating costs.⁷ Many others still consider themselves global companies, but they have significantly regionalized their operations to reduce transportation needs. Since economies of scale are not always optimized, costs are occasionally higher. Nevertheless, we have a vigorous global economy and all are adjusting to the new realities of global life and commerce. It is simply the case that we hardly ever think about getting on a plane anymore.

⁶ At that time, of course, everyone still believed that they were dealing (mostly) with classic (probably state-sponsored) terrorism and that the guilty would be caught eventually.

⁷ Cargo transport cost much less than passenger operations, but cargo, too, was often targeted and has not escaped many of the security costs associated with all air transport.

Postscript: Just yesterday (as I was concluding this introductory essay) my nine year old was reading a novel set in the 1980s. She was puzzled by some of the things she was reading. “Hey Dad,” she asked, “what’s a carry-on?”